Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Preparation for International Telecommunication Union World Radiocommunication Conferences	)	IC Docket No. 94-31

REPLY COMMENTS

AT&T Corp. ("AT&T") respectfully submits the following reply comments in response to the Commission's Notice of Inquiry ("NOI"), FCC 94-96, released April 20, 1994.

The NOI seeks comment on a number of issues regarding World Radiocommunication Conferences ("WRCs"), including items on the agenda for the 1995 conference ("WRC-95") and proposed procedures to improve the Commission's preparation for future WRCs. AT&T replies to comments on matters related to Mobile Satellite Service ("MSS") feeder links, certain proposals regarding the radio regulations and preparation for future WRCs.[1]

I. MSS FEEDER LINKS

The NOI points out that spectrum available for MSS feeder links operating above 1 GHz will be scarce and that

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[1] The comments addressed in these reply comments, and the abbreviations used to identify them, are set forth in the Appendix.

sufficient spectrum has not yet been identified (¶ 23). Several commenters proposed various bands for this purpose, some of which might indeed be suitable but others of which are not.

A. 5000-5250 MHz

Ellipsat (Exhibit A) and LQP (p. 5) proposed twelve bands below 15 GHz for MSS feeder links to operate in the reverse direction from the present allocation to Fixed Satellite Service ("FSS"). One such band is 5150-5216 MHz operating in the Earth-to-space direction (i.e. uplinks). Constellation (p. 8) also refers to this band while CMC (p. 21) refers to frequencies between 5000 and 5250 MHz, in both cases without specifying direction. AT&T believes that these frequencies could be used for MSS uplinks as Ellipsat and LQP propose.

The Ellipsat and LQP proposal would not prevent usage of 5000-5250 MHz for high-speed local digital networks under a future allocation for mobile service. High-speed local digital networks provide short distance radio links between all kinds of computer and multimedia systems. They permit people to participate in local networks typically inside buildings, which may include stationary users as well as users in motion on foot or in slow moving equipment. Productivity enhancing applications cover a broad range of activities, including in offices, factories, hospitals and schools. These applications will reduce costs and improve service throughout the economy, thereby increasing the

competitiveness of United States industry in world markets. Moreover, these networks can provide mobile access to the National Information Infrastructure. More and better jobs, as well as better living, for the American people will result.

AT&T urges two United States actions at WRC-95 to help make this a reality. First, if the Commission is persuaded to support an allocation of spectrum between 5000 and 5250 MHz for MSS feeder links either at WRC-95 or at a future WRC, such support should be for the uplink direction as Ellipsat and LQP propose. Studies have shown that high-speed local digital networks would not interfere with MSS uplinks in that band. Downlinks would be more susceptible to interference from those networks, making sharing much more difficult. Second, whether or not there is an MSS feeder link allocation at 5.2 GHz, the United States should press for inclusion in the WRC-97 agenda of a proposal to allocate, worldwide, 5000-5250 MHz for mobile service to accommodate high-speed local digital networks. This will allow time for detailed economic and technical analysis supporting such an allocation.

B. Other Frequencies Below 15 GHz

Although 5000-5250 MHz may be useful for MSS feeder links, the same is not true of many of the frequencies below 15 GHz identified by Ellipsat and LQP. Frequencies between 10.7 and 11.7 GHz, which appear in four of the spectrum blocks identified by these commenters, are

heavily used by terrestrial fixed services. Study work by the International Telecommunications Union - Radiocommunications ("ITU-R") establishes that MSS operating in the reverse direction from FSS would typically have to transmit at unacceptably low power levels in order to avoid interfering with terrestrial service.[2]

Two other bands on the Ellipsat and LQP list, 11.7-12.2 GHz and 14.0-14.5 GHz, are heavily used by the FSS. AT&T agrees with GE Americom (p. 2) that sharing these bands with MSS feeder links would be "virtually impossible without inflicting harmful interference" to FSS, which brings video and audio programming to just about every home in the nation by means of broadcasting, cable or backyard satellite antennas and which also provides important data and other services to business and government.[3] Therefore, the United States should oppose any use of these bands by MSS.

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[2] Recommendation ITU-R SF1005 (1993) makes this point regarding geostationary satellites transmitting in the reverse direction from the previously authorized service. A June, 1994 paper submitted by the United States to a Special Rapporteur's meeting of Working Party 4/9S shows that a similar outcome would be required if the second satellite system were non-geostationary.

[3] As CMC points out (pp. 17-18), the same may not be true regarding spectrum only lightly used by FSS.

C. Radio Regulation 2613

The NOI (¶25) requested comment on RR 2613, which requires non-geostationary satellites and their associated earth stations to avoid interfering with geostationary satellites in the FSS. This point would be of particular importance if MSS feeder links were permitted to share any FSS bands.

TRW urged the United States to seek worldwide adoption of a complex interpretation of RR 2613, which it characterized as the "emerging U. S. interpretation" (pp. 10-12),[4] which substantially weakens the protection for geostationary satellites from interference by non-geostationary satellites. Ellipsat and Teledesic (p. 4) go even further, and urge that RR 2613 not apply at all to bands shared by FSS and MSS feeder links operating in the reverse direction.

More recent work by ITU-R Task Group 4/5 ("TG 4/5") supports a better solution to any problems with applying RR 2613. The TG 4/5 approach is to identify some specific bands for preferred use by geostationary networks (called category A), others for preferred use by non-geostationary MSS feeder links (called category B), and

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[4] As the NOI notes (¶ 24), this interpretation was developed in 1993 by a negotiated rulemaking committee in CC Docket No. 92-166. The Commission has asked for public comment but has not adopted it.

still others for co-equal use by both services (called category C). Under this approach, the preferred use (A or B) would be entitled to complete protection against interference from the other.[5] AT&T urges the United States to support at WRC-95 the TG 4/5 approach and adoption of the following category A identifications to protect geostationary satellites against interference from non-geostationary ones.[6]

Downlink	Uplink
3.7-4.2 GHz	5.925-6.425 GHz
11.7-12.2 GHz	14.0-14.5 GHz

II. RADIO REGULATION 2566

RR 2566 contains the Power Flux Density ("PFD") limit for space stations in certain bands shared with fixed or mobile services.[7] Ellipsat (pp. 8-9), Constellation (p. 6) and LQP (pp. 13-15) propose different relaxations of this limit in the 2483.5-2500 MHz band.[8] Although these

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[5] CWS (pp. 4-5); CMC (pp. 18-19) and Motorola (pp. 15-16) also endorse the TG 4/5 approach.

[6] The working group of TG 4/5 has decided upon this categorization of those bands and is continuing its activity of categorizing each of the FSS bands between 3 and 31 GHz.

[7] PFD is a metric applicable to emissions from satellites for the purpose of protecting terrestrial services against harmful interference.

[8] AirTouch (p. 6) proposes relaxation but does not advocate specific numbers.

commenters recognize that this issue is being studied by Task Group 2/2 ("TG 2/2"), they nevertheless urge a United States position at WRC-95. Since the various United States interests have not yet agreed upon a U.S. position on this and other issues before TG 2/2, resolution of this narrow technical issue at this time is premature.[9]

III. IMPROVING COMMISSION PROCEDURES REGARDING FUTURE WRCs

In addition to seeking comment on specific WRC issues, the NOI proposes that the Commission establish a regularized process for conference preparation, including a permanent conference preparatory structure so that public views can be timely considered now and in the future. Although the Commission's practice of appointing an Industry Advisory Committee ("IAC") in connection with preparations for each WRC has worked well toward that end, a permanent structure for public input to the Commission should regularize Commission staff consideration of WRC-related issues, and thereby enhance the quality of the Commission's deliberations.[10]

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[9] Similarly, AMSC's position (p. 12) that power limits should be imposed on terrestrial systems operating in the 1990-2010 MHz and 2165-2100 MHz bands is premature. No such decision can be reached without analyzing the impact on existing services and resolving other issues relevant to sharing this band with MSS.

[10] ARINC (p. 2); ARRL (p. 10); CMC (p. 15) and CWS (p. 7) also endorse this concept.

While the Commission remains receptive to public input on WRC preparation, it has been AT&T's experience as a participant in past IACs and as a commenter in WRC dockets that at least some aspects of the ultimate United States position come out of another part of the government without public notice or opportunity for comment. AMSC reports the same experience (p. 24). Thus, in addition to improving its own processes as the NOI proposes, the Commission should do all it can to induce other government agencies to be equally forthcoming.[11] AMSC's suggestions (pp. 23-24) that executive agencies become active participants in the IACs on WRC issues and that the Commission and NTIA establish between them a joint committee open to the private sector are good ways to foster open two-way communications between government and the public on WRC-related matters.

CONCLUSION

The Commission's activities in participating in development of the United States position in WRC-95 should reflect AT&T's reply comments. The Commission should improve its procedures for obtaining public input into WRC

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[11] Most of the commenters who support a permanent Commission structure for preparing for future WRC's also endorse participation of other government agencies in that structure.

preparation as proposed in the NOI and urge other government agencies also to be open to such input.

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APPENDIX

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AirTouch Communications - "AirTouch"
American Mobile Satellite Corporation - "AMSC"
American Radio Relay League, Incorporated - "ARRL"
COMSAT Mobile Communications - "CMC"
COMSAT World Systems - "CWS"
Constellation Communications, Inc. - "Constellation"
Ellipsat Corporation - "Ellipsat"
GE American Communications, Inc. - "GE Americom"
Loral/Qualcomm Partnership, L.P. - "LQP"
Motorola Satellite Communications, Inc. and Iridium Inc. - "Motorola"
Teledesic Corporation - "Teledesic"
TRW, Inc. - "TRW"

CERTIFICATE OF SERVICE

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